

Emerald Scientist explains phase determination using X-ray crystallography in webinar sponsored by Rigaku

Bainbridge Island WA, May 11, 2011 —Emerald BioStructures scientist Thomas Edwards will demonstrate a straightforward and powerful method of determining phases for macromolecular crystal structures in an upcoming webinar sponsored by X-ray equipment supplier [Rigaku](#). This method reduces the need for laborious derivative-labeled protein preparation, crystallization re-optimization, or synchrotron radiation. Instead, it uses existing native crystals and an innovative process called iodide ion single-wavelength anomalous dispersion (SAD).

The webinar entitled “SAD phasing at rotating anode wavelengths using iodide ions” will be held May 12, 2011. Registration can be found at the [Rigaku web site](#).

“Iodide ions bind to numerous hydrophobic and positively charged patches on protein surfaces, facilitating phase determination using the strong anomalous signal of iodide at rotating anode wavelengths,” says Edwards.

Edwards and colleagues at Emerald have used this technique across a wide range of crystallization conditions with a >90% success rate in at least twenty cases. Findings have been reported in the [Journal of Structural and Functional Genomics](#). The webinar also presents information on the combined use of SAD and molecular replacement (MR) for targets with weak MR solutions.



About Emerald BioStructures

Emerald BioStructures is an integrated gene-to-structure contract research organization that provides collaborative drug discovery services to pharmaceutical companies, biotechnology companies, academic institutions, and government facilities. The company operates a high-throughput platform leveraged for fragment-based lead discovery and structure-based drug design. Emerald's work provides a solid foundation for the discovery of highly selective, efficacious drugs.

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